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1 AAAAAGAAAG GAAGAAAATG GAAATACAAC AAACACACCG CAAAATCAAT  
51 CGCCCTCTGG TTTCTCTCGC TTTAGTAGGA GCATTAGTCA GCATCACACC  
101 GCAACAAAGT CATGCCGCCT TTTTCACAAC CGTGATCATT CCAGCCATTG  
151 TTGGGGGTAT CGCTACAGGC ACCGCTGTAG GAACGGTCTC AGGGCTTCTT  
201 AGCTGGGGGC TCAAACAAGC CGAAGAAGCC AATAAAACCC CAGATAAACC  
251 CGATAAAGTT TGGCGCATT C AAGCAGGAAA AGGCTTTAAT GAATTCCCTA  
301 ACAAGGAATA CGACTTATAC AGATCCCTTT TATCCAGTAA GATTGATGGA  
351 GGTTGGGATT GGGGGAATGC CGCTAGGCAT TATTGGGTCA AAGGCGGGCA  
401 ACAGAATAAG CTTGAAGTGG ATATGAAAGA CGCTGTAGGG ACTTATACCT  
451 TATCAGGGCT TAGAACTTT ACTGGTGGGG ATTTAGATGT CAATATGCAA  
501 AAAGCCACTT TACGCTTGGG CCAATTCAAT GGCAATTCTT TTACAAGCTA  
551 TAAGGATAGT GCTGATCGCA CCACGAGAGT GATTTCAACG CTAAAAATAT  
601 CTCAATTGAT AATTTTGCAG AAATCAACAA CTCGTGTGGG TTCTGGAGCC  
651 GGGAGGAAAG CCAGCTCTAC GGTTTTGA CT TTGCAAGCTT CAGAAGGGAT  
701 CACTAGCGAT AAAACGCTG AAATTTCTCT TTATGATGGT GCCACGCTCA  
751 ATTTGGCTTC AAGCAGCGTT AAATTAATGG GTAATGTGTG GATGGGCCGT  
801 TTGCAATACG TGGGAGCGTA TTTGGCCCCT TCATACAGCA CGATAAACAC  
851 TTCAAAAGTA ACAGGGGAAG TGAATTTTAA CCACCTCACT GTTGGCGATA  
901 AAAACGCCGC TCAAGCGGGC ATTATCGCTA ATAAAAGAC TAATATTGGC  
951 AACTGGATT TGTGGCAAAG CGCCGGGTTA AACATTATCG CTCCTCCAGA  
1001 AGGTGGCTAT AAGGATAAAC CCAATAATAC CCCTTCTCAA AGTGGTGCTA  
1051 AAAACGACAA AAATGAAAGC GCTAAAAACG ACAAACAAGA GAGCAGTCAA  
1101 AATAATAGTA AACTCAGGT CATTAAACCA CCCAATAGTG CGCAAAAAAC  
1151 AGAAGTTCAA CCCACGCAAG TCATTGATGG GCCTTTTTCG GGCGGCAAAG  
1201 ACACGGTTGT CAATATCAAC CGCATCAACA CTAACGCTGA TGGCAGGATT  
1251 AGAGTGGGAG GGTTTAAAGC TTCTCTTACC ACCAATGCGG CTCATTTGCA  
1301 TATCGGCAAA GGCGGTGTCA ATCTGTCCAA TCAAGCGAGC GGGCGCTCTC

FIG. 1A

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1351 TTATAGTGGA AAATCTAACT GGGAAATATCA CCGTTGATGG GCCTTT JA  
1401 GTGAATAATC AAGTGGGTGG CTATGCTTTG GCAGGATCAA GCGCGAATTT  
1451 TGAGTTTAAAG GCTGGTACGG ATACCAAAAA CGGCACAGCC ACTTTTAATA  
1501 ACGATATTAG TCTGGGAAGA TTTGTGAATT TAAAGGTGGA TGCTCATACA  
1551 GCTAATTTTA AAGGTATTGA TACGGGTAAT GGTGGTTTCA ACACCTTAGA  
1601 TTTTAGTGGC GTTACAGACA AAGTCAATAT CAACAAGCTC ATTACGGCTT  
1651 CCACTAATGT GGCCGTTAAA AACTTCAACA TTAATGAATT GATTGTAAAA  
1701 ACCAATGGGA TAAGTGTGGG GGAATATACT CATTTTAGCG AAGATATAGG  
1751 CAGTCAATCG CGCATCAATA CCGTGCGTTT GGAAACTGGC ACTAGGTCAC  
1801 TTTTCTCTGG GGGTGTTAAA TTAAAGGTG GCGAAAAATT GGTTATAGAT  
1851 GAGTTTTACT ATAGCCCTTG GAATTATTTT GACGCTAGAA ATATTAAAAA  
1901 TGTTGAAATC ACCAATAAAC TTGCTTTTGG ACCTCAAGGA AGTCCTTGGG  
1951 GCACATCAAA ACTTATGTTT AATAATCTAA CCCTAGGTCA AAATGCGGTC  
2001 ATGGATTATA GCCAATTTTT AAATTTAACC ATTCAAGGGG ATTTTCATCA  
2051 CAATCAAGGC ACTATCAACT ATCTGGTCCG AGGTGGGAAA GTGGCAACCT  
2101 TAAGCGTAGG CAATGCAGCA GCTATGATGT TTAATAATGA TATAGACAGC  
2151 GCGACCGGAT TTTACAAACC GCTCATCAAG ATTAACAGCG CTCAAGATCT  
2201 CATTAAAAAT ACAGAACATG TTTTATTGAA AGCGAAAATC ATTGGTTATG  
2251 GTAATGTTTC TACAGGTACC AATGGCATTG GTAATGTAA TCTAGAAGAG  
2301 CAATTCAAAG AGCGCCTAGC CCTTTATAAC AACAATAACC GCATGGATAC  
2351 TTGTGTGGTG CGAAATACTG ATGACATTAA AGCATGCGGT ATGGCTATCG  
2401 GCGATCAAAG CATGGTGAAC AACCTGACA ATTACAAGTA TCTTATCGGT  
2451 AAGGCATGGA AAAATATAGG GATCAGCAAA ACAGCTAATG GCTCTAAAAT  
2501 TTCGGTGTAT TATTTAGGCA ATTCTACGCC TACTGAGAAT GGTGGCAATA  
2551 CCACAAATTT ACCCACAAAC ACCACTAGCA ATGCACGTTC TGCCAACAAC  
2601 GCCCTTGCAC AAAACGCTCC TTTCGCTCAA CCTAGTGCTA CTCCTAATTT  
2651 AGTCGCTATC AATCAGCATG ATTTTGGCAC TATTGAAAGC GTGTTTGAAT

FIG. 1B

ERSATZBLATT

T 0 2 0 0 0 7 5 7 6 6 0

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2701 TGGCTAACCG CTCTAAAGAT ATTGACACGC TTTATGCTAA CTCAGGCGCT  
2751 CAAGGCAGGG ATCTCTTACA AACCTTATTG ATTGATAGCC ATGATGCGGG  
2801 TTATGCCAGA AAAATGATTG ATGCTACAAG CGCTAATGAA ATCACCAAGC  
2851 AATTGAATAC GGCCACTACC ACTTTAAACA ACATAGCCAG TTTAGAGCAT  
2901 AAAACCAGCG GCTTACAAAC TTTGAGCTTG AGTAATGCGA TGATTTTAAA  
2951 TTCTCGTTTA GTCAATCTCT CCAGGAGACA CACCAACCAT ATTGACTCGT  
3001 TCGCCAAACG CTTACAAGCT TAAAAGACC AAAAATTCGC TTCTTTAGAA  
3051 AGCGCGGCAG AAGTGTTGTA TCAATTTGCC CCTAAATATG AAAAACCTAC  
3101 CAATGTTTGG GCTAACGCTA TTGGGGGAAC GAGCTTGAAT AATGGCTCTA  
3151 ACGCTTCATT GTATGGCACA AGCGCGGGCG TAGACGCTTA CCTTAACGGG  
3201 CAAGTGGAAG CCATTGTGGG CGGTTTTGGA AGCTATGGTT ATAGCTCTTT  
3251 TAATAATCGT GCGAACTCCC TTAAGTCTGG GGCCAATAAC ACTAATTTTG  
3301 GCGTGTATAG CCGTATTTTA ACCAACCAGC ATGAATTTGA CTTTGAAGCT  
3351 CAAGGGGCAC TAGGGAGCGA TCAATCAAGC TTGAATTTCA AAAGCGCTCT  
3401 ATTACAAGAT TTGAATCAAA GCTATCATT CTTAGCCTAT AGCGCTGCAA  
3451 CAAGAGCGAG CTATGGTTAT GACTTCGCGT TTTTATAGGAA CGCTTTAGTG  
3501 TTAAACCAA GCGTGGGTGT GAGCTATAAC CATTTAGGTT CAACCAACTT  
3551 TAAAGCAAC AGCACCAATC AAGTGGCTTT GAAAAATGGC TCTAGCAGTC  
3601 AGCATTTATT CAACGCTAGC GCTAATGTGG AAGCGCGCTA TTATTATGGG  
3651 GACACTTCAT ACTTCTACAT GAATGCTGGA GTTTTACAAG AGTTCGCTCA  
3701 TGTTGGCTCT AATAACGCCG CGTCTTTAAA CACCTTTAAA GTGAATGCCG  
3751 CTCGCAACCC TTAAATACC CATGCCAGAG TGATGATGGG TGGGGAATTA  
3801 AAATTAGCTA AAGAAGTGTT TTTGAATTTG GGCATTGTTT ATTTGCACAA  
3851 TTTGATTTCC AATATAGGCC ATTCGCTTC CAATTTAGGA ATGAGGTATA  
3901 GTTCTAAAT ACCGCTCTTA AACCCATGCT CAAAGCATGG GTTTGAAATC  
3951 TTACAAAACA

FIG. 1C

ERSATZRI ATT

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1 MEIQQTHRKI NRPLVSLALV GALVSITPQQ SHAAFFTTVI IPAIVGGIAT  
51 GTAVGTVSGL LSWGLKQAEK ANKTPDKPDK VWRIQAGKGF NEFPNKEYDL  
101 YRSLSSKID GGWDWGNAAR HYWVKGGQQN KLEVDMKDAV GTYTLISGLRN  
151 FTGGDLVNM QKATLRLGQF NGNSFTSYKD SADRTTRVIS TLKISQLIIL  
201 QKSTTRVSG AGRKASSTVL TLQASEGITS DKNAEISLYD GATLNLASSS  
251 VKLMGNVWVG RLQYVGAYLA PSYSTINTSK VTGEVNFNHL TVGDKNAAQA  
301 GIIANKKTNL GTLDLWQSAG LNIIAPPEGG YKDKPNNTPS QSGAKNDKNE  
351 SAKNDKQESS QNNSNTQVIN PPNSAQKTEV QPTQVIDGPF AGGKDTVVNI  
401 NRINTNADGT IRVGGFKASL TTNAHLHIG KGGVNLNQA SGRSLIVENL  
451 TGNITVDGPL RVNNQVGGYA LAGSSANFEE KAGTDTKNGT ATFNNDISLG  
501 RFVNLKVDAH TANFKGIDTG NGGFNTLDFS GVTDKVNINK LITASTNVAV  
551 KNFNINELIV KTNGISVGEY THFSEDIGSQ SRINTVRLET GTRSLFSGGV  
601 KFKGGEKLV DEFYYSWNY FDARNIKNVE ITNKLAFGPQ GSPWGTSKLM  
651 FNNLTLGQNA VMDYSQFLNL TIQGDFINNQ GTINYLVRRG KVATLSVGNA  
701 AAMMFNNDID SATGFYKPLI KINSAQDLIK NTEHVLLKAK IIGYGNVSTG  
751 TNGISNVNLE EQFKERLALY NNNNRMDTCV VRNTDDIKAC GMAIGDQSMV  
801 NNPDPNYKYLI GKAWKNIGIS KTANGSKISV YYLGNSTPTE NGGNTTNLPT  
851 NTSNARSAN NALAQNAPFA QPSATPNLVA INQHDFGTIE SVFELANRSK  
901 DIDLTYANSQ AQGRDLLQTL LIDSHDAGYA RKMIDATSAN EITKQLNTAT  
951 TTLNNIASLE HKTSGLQTLS LSNAMILNSR LVNLSRRHTN HIDSFAKRLQ  
1001 ALKDQKFASL ESAAEVLYQF APKYEKPTNV WANAIGGTSL NNGSNASLYG  
1051 TSAGVDAYLN GQVEAIVGGF GSYGYSSFNN RANSLNSGAN NTNFGVYSRI  
1101 LTNQHEFDFF AQGALGSDQS SLNFKSALLQ DLNQSYHYLA YSAATRASYG  
1151 YDFAFFRNAL VLKPSVGVSY NHLGSTNFKS NSTNQVALKN GSSSQHLFNA  
1201 SANVEARYYY GDTSYFYMNA GVLQEFHVG SNNAASLNTF KVNAARNPLN  
1251 THARVMMGGE LKLAKEVFLN LGVVYLHNL SNIGHFASNL GMRYSF

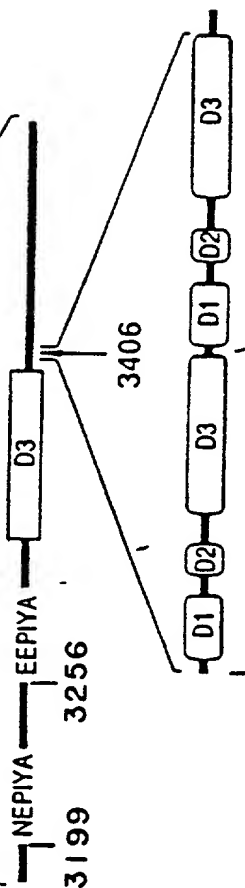
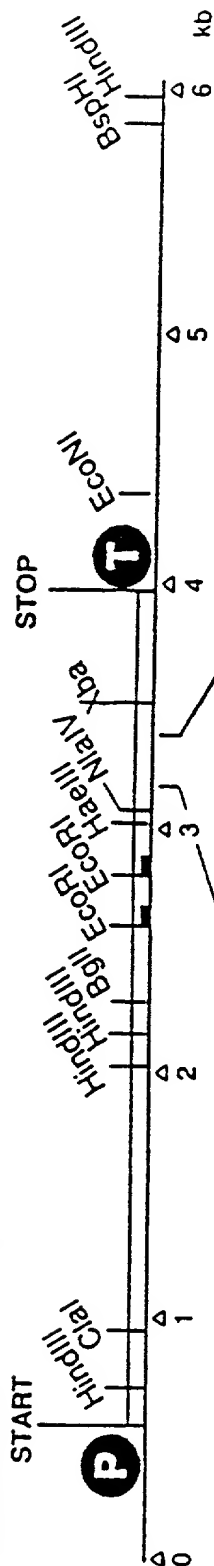
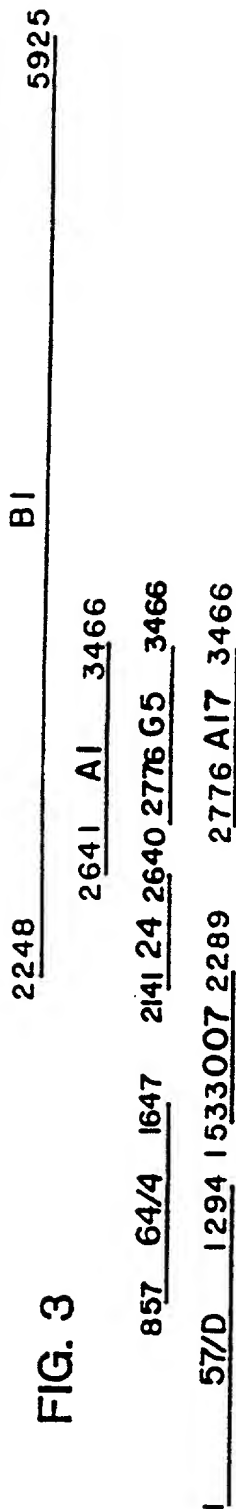
FIG. 2

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FIG. 3



g g g c g a t c g g t t a g c c c t g a a c c c a t t t a t g c t a c g a t t g a t g a t c t c c g g c g g a c c t t t c c c t t t g a a g g c a t g a t a a a g g t t g a t g a t c t c a g t a a g g t a

g r s v s P E P I Y A t i D D L g g p F P L K R H D K V D D L S K V

D1 D2 D3

CTCCATTTTAAGCAACTCCATAGACCACCTAAAGAACTTTTTTTAGGCTATCTTTGAA  
 GCTTAATTATACATGCTATAGTAGCATGACACACAACCAACTATTTTAGACGCTT  
 TCAAAAGATTTCATTTCTATTCTTATTAAAGTTCTTTCATTTTAGCAAAATTT  
 CTTTTTCAATATTAATGATTAAATGAATAAATAAATAAATGCTTGATATTGTTGAT  
 TTGACACTAACCAAGATACCGATAGGTATGAAGTATAGTAGAGGAGAACAAATGACT  
 M T  
 AATAATCTTCAAGTAGCTTTCTTAAAGTTGATAACGGCTGCTCGCTTCATAGCATCTGAT  
 23 N N L Q V A F L K V D N A V A S Y D P D  
 CAATTAGGGAAGTAATCTCCAATAAAGCGATCAAAAATCTACCACAAAAGTAATAGTAT  
 63 Q L R E E Y S N K A I K N P T K K N O Y  
 GAATCTTCCACAAGAGCTTCAGAAATTTGGGATCAGCGTTACCGAATTTTCCAAAGT  
 103 E S S T K S F Q K F G D Q R Y R I F T S  
 GAAATATCATACACCCCTATCTTGATGATAAGAGAAAGCGGAGTTTITGAATCT  
 143 E N I I Q P P I L D D K E K A E F L K S  
 ATGGCGTGTGATGAGTCTTGAAAGAAAGGCAAGAGCAAGAAATAATGGAGAGCCT  
 183 M G V F D E S L K E R Q E A E K N G E P  
 GATGTCAAGAAGCAATCAATCAAGAACCGATCCCGCTGTCACACCGATATAGCCACT  
 223 D V K E A I N Q E P V P H V Q P D I A T  
 AATTTTCTAAATTCACCTTTGGCGATATGGAATGTTAGATGTTGAGGAGTCGCTGAC  
 263 N F S K F T L G D M E M L D V E G V A D  
 TTAATGGGAGTCAATAATGGCATAGAACCTGMAAAAGTTTCAATTGTTGATG6GGGCAAT  
 303 L M G S H N G I E P E K V S L L Y G G N  
 AACAAATGGCTACATAATTAATGTGCATATGAAACCGGAGTGGCTTAGTCATAGCA  
 343 N N V A T I I N V H M K N G S G L V I A  
 G6CTCACACGAGCATTAGTCAAGAAGAGATCCAAACAAATAGATTTTCATGGAAATTT  
 383 G S Q R A L S Q E E I Q N K I D F M E F  
 ACTGAGATTAAAGATTTCCAAAAGACTCTAAGGCTTATTAGACGCCCTAGGGGATGAT  
 423 T E I K D F Q K D S K A Y L D A L G N D  
 AATGGGATTGAGCTACACTCTCAAGATTATGGGAAAAGACGATAGCTTAGAT  
 463 N G D L S Y T L K D Y G K K A D K A L D  
 TATTCTAATTTCAATACACCAACGCCCTCCAAGATCCCAATAGGGGTAGGCGGTACG

FIG. 4A

ERSATZBLATT

ATCTGCTCTATTGATTGTTTTTCCATTTTGTTCCTAGTGGAATCTTGGAATCACAAC  
 120 CATGTGCTCACCTTGACTAAACCATTTCTCCAAACCATATTAGCGTTGCAATTTGATTTCT  
 240 TTGTTAATTG6GGTAAAAATGTGAATCGCTTAGCCTTTAGACGCTGCAACGATCGGG  
 360 AATGAGAATGTTCAAGACATGAATTTGACTACTCAAGCGTGAGCGATTTTTCAGAGTCT  
 480 AACGAAACCATTTGACCAACACCAACCAACCGAGCGCTTTAACCCGACGCAATTTATC  
 600 N E T I D Q Q P Q T E A A F M P Q Q F I  
 CAAAACCAATCGTTGATAAGAACGATAGGATACAGGCAAGCTTTTGAAGGAATCTCG  
 720 Q K P I V D K N D R D N R Q I A F E G I S  
 TTTTCAGACTTTATCAATAAGAGCAATGATTTAATCAACAAGACAACTCATTTGATGA  
 840 F S D F I N K S N D L I N K D N L I D V  
 TGGGTGCTCCATCAAAACGATCCGCTAAATCAACACCCGATCGATCCGAATTTTATG  
 960 W V S H Q N D P S K I M T R S I R N F M  
 GCCAAACAATCTTTTGCAGGAATCATTTATAGGGAATCAAAATCCGAACGGATCAAAAGTTC  
 1080 A K Q S F A G I I I G M Q I R T D Q K F  
 ACTGGTGGGATGTTGGATATTTTCTCTCATTTATTTGACAAAACAATCTTCT  
 1200 T G G D W L D I F L S F I F D K K Q S S  
 ACCACCGACATACAGGCTTACCGCTGAAGCTAGAGATTTACTTGAAGGGGT  
 1320 T T T D I Q G L P P E A R D L L D E R G  
 ATTGATCCCAATTACAGTTCAANTCAATATTGATTCAACAATAACGCTCTGCTTCTGTG  
 1440 I D P N Y K F N Q L L I H N M A L S S V  
 GGTG6TCTGGAGCTAGGATGGAACGCCCGCTTGGTTTATAAGACCAACAAGGC  
 1560 G G P G A R H D W N A T V G Y K D Q Q G  
 GGTGGTGAAGAGGATTAACACCCCTAGTTTTTATCTCTACAAGAGACCAACTCACA  
 1680 G G E K G I N N P S F Y L Y K E D Q L T  
 CTTGCACAAAATATGCTAAATTAGACAACCTTGAAGAGAGAGAGAGGAAATTCGGA  
 1800 L A Q N N A K L D N L S E K E K E K F R  
 CGTATTGCTTTTGTCTTAAAGACACACAACATTTCAAGCTTAAATTTACTGAGTTTGT  
 1920 R I A F V S K K D T K H S A L I T E F G  
 AGGAGAGAAAATGTTACTCTCAAGGTAGCCCTAAACATGATGGCGTATGTTTGTGAT  
 2040 R E K M V T L Q G S L K H D G V M F V D  
 AATGGCGTTTCCCATTTAGAAAGTAGGCTTTTACAAAGGTAGCTATCTTTAATTTGCTGAT  
 2160

FIG. 4B

ERSATZBLATT

503 Y S N F K Y T N A S K N P N K G V G V T  
 TTAATAATCTCGTATCAGTAGTTTCGTAAGCGGAATTTAGAGGATAAATACTAACCACT  
 543 L N N L A I T S F V R R N L E D K L T T  
 GAATGGTTGGAAAACCTTTAAACTTCAATAAGCTGTAGCTAGCTAAACACAGGC  
 583 E L V G K T L N F N K A V A D A K N T G  
 CATTAGAGAAGAAGTAGAGAAAATTTGGAGAGCAAGCGGCAACAAAATAAATG  
 623 H L E K E V E K K L E S K S G N K N K M  
 GCTAATAGAGACGCAAGAGCAATCGCTACGCTCAGATCTTAAGGCATCAAAAGGGA  
 663 A N R D A R A I A Y A Q N L K G I K R E  
 GAATTCAAAATGGCAAAATAGGATTTCAAGCAAGGCAAGAACTAAAGCCCTT  
 703 E F K N G K N K D F S K A E E T L K A L  
 AATGCACTTTGAATGAATTCAAAATGGCAAAATAAGGATTTTCAGCAAGGTAAAGCAA  
 743 N A A L N E F K N G K N K D F S K V T Q  
 AAGTTGATAATCTCAATCAAGCGGTATCAGTGGCTAAAGCAACGGGTGATTTTCAGTAGG  
 783 K V D M L N O A V S V A K A T G D F S R  
 CAAAAAATGAAGTCTCAATGCTAGAAAAATCTGAATATATCAATCCGTTAAGAT  
 823 Q K N E S L N A R K K S E I Y Q S V K N  
 AAAAATTTTCGACATCAAGAAGAGTTGAATGCAAACTTGGAAATTTCAATAACAT  
 863 K N F S D I K K E L N A K L G N F N N N  
 CAAGCAGTAGCTTGAAGAACCCATTACCTCAAGTTGCTAAAGGTAAATGCAAAA  
 903 Q A A S L E E P I Y A Q V A K K V N A K  
 CCTTTGAAAGGCATGATAAAGTTGATCTCAGTAAGGTAGGCTTTCAAGGAATCAA  
 943 P L K R H D K V D D L S K V G L S R N Q  
 TTTGGCAATCTAGAGCAACGATAGACAAGCTCAAGATTCTCAAAACACACAAATCCCATG  
 983 F G N L E Q T I D K L K D S T K H N P M  
 TAGCTACTAACAGCCACATACGCAATTAATAGCAATATCAAAAATGGAGCAATCAATGAA

FIG.4C

ERSATZBLATT

N G V S H L E V G F N K V A I F N L P D  
 AAAGGATTGCCCCACAGAAGCTAATAAGCTTATCAAGATTTTTTGGAGCAGCAACAA 2280  
 K G L S P Q E A N K L I K D F L S S N K  
 AATTATGATGAAGTGAANAAGCTCAGAAAGATCTTGAAATAATCTTAAGGAACGAGAG 2400  
 N Y D E V K K A Q K D L E K S L R K R E  
 GAAGCAAAAGCTCAAGCTAACAGCCAAAGATGAGATTTTGGCTTATCAATAGAGAG 2520  
 E A K A Q A N S Q K D E I F A L I N K E  
 TTGCTGATAAATCTGAATAATGTCAACAAGATTTGAAGAGCTTTGATAATCTTTTGAT 2640  
 L S D K L E N V N K N L K D F D K S F D  
 AAAGGTTGCTGAAGATTTAGGTATCAATCCAGAAATGGATTTCAAAAGTTGAACCTT 2760  
 K G S V K D L G I N P E W I S K V E N L  
 GCAAAAGCGACCTTGAAATTCGTTAAGATGTGATCATCAATCAAAAGGTACGGAT 2880  
 A K S D L E N S V K D V I I N Q K V T D  
 GTAGAGCAAGCGTTAGCGGATCTCAAAAATTTCTCAAGGAGCAATTTGGCCCAACAGCT 3000  
 V E Q A L A D L K N F S K E Q L A Q A  
 GGTGTGAATGGAAACCTTAGTCGGTAATGGGTATCTCAAGCAGAGGCCACAACCTTTCT 3120  
 G V N G T L V G N G L S Q A E A T T L S  
 AACAAATGGAATCAAAAACGAAACCCATTTATGCTAAGTTAATAAAGAAGCAGGG 3240  
N N N G L K N E P I Y A K V N K K A G  
 ATTGACCGACTCAATCAATAGCAGTGGTTTGGGTGTTGTTAGGGCAAGCAGGGCTTC 3360  
 I D R L N Q I A S G L G V V G O A A G F  
 GAATTGGCTCAGAAAATTGACAACTCTCAATCAAGCGGTATCAAGAGCTAAAGCAGGTTT 3480  
 E L A Q K I D N L N O A V S E A K A G F  
 AATCTATGGTTGAAGTGCAAAAGTACCTGCTAGTTTGTGAGCAAACTAGACAAT 3600  
 N L W V E S A K K V P A S L S A K L D N  
 AAAGCGACCGGCATGCTAACGCAAAAACCCCTGAGTGGCTCAAGCTCGTGAATGATAAG 3720

FIG.4D

ERSATZBLATT

1023 Y A T N S H I R I N S N I K N G A I N  
 ATAGTTGCCATAATGAGGAGGTTCCCTTTGTCAGAGTATGATAAATTGGCTTC  
 1063 I V A H N V G S V P L S E Y D K I G F  
 GTAAAGACACTAATCTGGCTTTAGCGCAATTTTAAACCAATGCAATTTCTACAGCA  
 1103 V K D T N S G F T Q F L T N A F S T A  
 GGTTTCCAAAATCTTAAGGATTAAAGGATACCAAAAACGCCAAACCAACCCCTTIG  
 1143 G F Q K S  
 TGAATGTACCAATTCATGGTATCATATCCCATACATTCTATCTAGCGTAGGAAG  
 AACTCTGAATAATCCCTATTATAGGGACACAGAGTGAGAACCAACTCTCCCTACGG  
 GACAGACACTAACGAAAGGCTTTGTCTTTAAGTCTGCATGGATTTCTTACCCC  
 CGAAAATTAAATAAGGGTTATAAGAGAGCATAAACTAGAAAACAAGTAGCTATA  
 GAAAAATCAGAAAACCATAGGAATTATCACACCTTATAATGCCCCAAAAGACGCT  
 ATGCCCTTCAAGTGAAGAGGCAGATATTATTATTATTCACCCGTGAANAATTGTG  
 ATCTCATTTTGTGGTAAAANGCTTTCTTTGAGAAATTTATGAAGCGCTTTATCAACAC  
 CATTCTCGCTTCAAAACGCTTTCATAAATCTCTAAAGCGCTTTATTAATCAACAC  
 TTATTAGCGTTACAAATTTGAGCCATTCTTTAGCTTGTTTTCTAGCCAGATCACATC  
 CTGCAATA TCCTACAAATAGCATCGCCGAA TGGATGAGTAGGGGGGTGTTGAAG  
 TAAATAATCACTTCGGGAAAATCTTTAAGGGAGTGAAATAAATACGCATGCAAGTT  
 TGGGAACATTCAAATAGCTTGTGTTTCAGGGCATTGCTAAGCGTTGGATTGG  
 GCTAAATGCTTGGCTCAATCAGCCCAATAGGGATTTTGGAAATGCTTTTGCATC  
 TTGAAAAAATCCAAAGCCCTAAGCCAAATTGCTTGATCGTAGTGGGGTCTTTAGTG  
 AGGCTTTTAAACGCTAAACCCCTCCACACCGCTATCAAAAACGCTATTTCATG  
 TCTTCATTGCTCTAGTTTGTGCAATTTAGAAATAGACAAAGCTT 5925

FIG. 4E

ERSATZBLATT

E K A T G M L T Q K N P E W L K L V M D K  
 ACCCAGAAGTAATGAAGATTATTCTGATTCGTTCAAGTTTTCCACCAAGTTGAACA/TGCT 3840  
 N Q K N M K D Y S D S F K F S T K L N N  
 TCTTATTACTGCTTGGCGAGAGAAAATCGGAGCATGGAATCAAGAACGTTAATACAAAACJ 3960  
 S Y Y C L A R E N A E H G I K N V N T K G  
 CTAAAGCGAGGGGTTTTTTAANTACTCCTTAGCAGAAATCCCAATCGTCTTAGTATTGGGA 4080  
 TGTGCAAGTTACGCCTTTGGAGATATGATGTGTGAGACCTGTAGGGAATGCGTTGGAGCTCA 4200  
 GCAACATCAGCCTAGGAAGCCCAATCGTCTTAGCGGTTGGGCACTTCACCTTAAANAATATCC 4320  
 AAAAGACTTAACCCCTTGTCTTAAATTAAGTTTGATTGTGCTAGTGGGTTCTGTATAGTG 4440  
 ACAAGATCAAGTTCAAAAATCATAGAGCTTTTAGAGCAAAATTGATCGCGCTCTTAACCAA 4560  
 TCGGATCAGAAGTGGAAAATACGGCTTCAAGAAATTTGATGAGCTCAANAATAGACACTGTGG 4680  
 GTAACTTTCTTCTTGTGCTAGATTCTTAACCGCTTGAATGTGGCTATTTCTAGGCAAAAGAA 4800  
 ATATCTTTAGCGCTATTTTGCAAGTCTGTAGATAGTAATCTTTTCCAAGATAATCATTAGA 4920  
 AATACCCCTTATAGTGTGAGCTATAGCCCTTTAG66AATGCGTGCAATTTTAAAGGCGTATTTTG 5040  
 GCCGCTCGCATGAATTCACCTTTAG66AATGCGTGCAATTTTAAAGGCGTATTTTG 5160  
 G6CAAAATGCTCCATAAATAGCCCTCAATTTTGAAGCGATTAAAGGAAAATGCGTGAACCC 5280  
 TCTAACCAATTGCGCCCTCAAAATACCTTCTCAATCAAGGCAACAAAAGAGAGTGGCTAAA 5400  
 ATCGTGGCTTTTGTGCTAGCATAAATAG66GCGTTTATCTTTTACTTTTGTGCTTGATC 5520  
 TCTTCTAAGCTAGAGCGCTGCTGTTGTCATGCCACAATCAATAATCAATCTGGTGGGT 5640  
 CCATAAGGCACTCTAGCCGCTATGCCATAATAGATGATTTTCATCAAAATATGCGCTTTTAA 5760  
 ACACCTTTTAAATTTAATG6GATTAAATAG6GATTTTATTTTTCATTCATTAAAGTTTAAAT 5880

FIG. 4F

ERSATZBLATT



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10 30 50  
 AAGCTTGCTGTCATGATCACAAAAACACTAAAAACATTATTATTAAGGATACAAAATG  
 M  
 70 90 110  
 GCAAAGAAATCAAATTTTCAGATAGTGGGAGAAACCTTTTATTTGAAGGCGTGAGGCAA  
 A K E I K F S D S A R N L L F E G V R Q  
 130 150 170  
 CTCCATGACGCTGTCAAAGTAACCATGGGGCCAAGAGGCAGGAATGTATTGATCCAAAAA  
 L H D A V K V T M G P R G R N V L I Q K  
 190 210 230  
 AGCTATGGCGCTCCAAGCATCACCAAAGACGGCGTGAGCGTGGCTAAAGAGATTGAATTA  
 S Y G A P S I T K D G V S V A K E I E L  
 250 270 290  
 AGTTGCCAGTAGCTAACATGGGCGCTCAACTCGTTAAAGAAGTAGCGAGCAAAACCGCT  
 S C P V A N M G A Q L V K E V A S K T A  
 310 330 350  
 GATGCTGCCGGCGATGGCACGACCACAGCGACCGTGCTAGCTTATAGCATTTTTAAAGAA  
 D A A G D G T T T A T V L A Y S I F K E  
 370 390 410  
 GGTGGAGGAATATCACGGCTGGGGCTAACCCATTGAAGTGAAACGAGGCATGGATAAA  
 G L R N I T A G A N P I E V K R G M D K  
 430 450 470  
 GCTGCTGAAGCGATCATTAAATGAGCTTAAAAAAGCGAGCAAAAAAGTAGGCGGTAAAGAA  
 A A E A I I N E L K K A S K K V G G K E  
 490 510 530  
 GAAATACCCAAGTGGCGACCATTTCTGCAAACCTCCGATCACAATATCGGGAAACTCATC  
 E I T Q V A T I S A N S D H N I G K L I  
 550 570 590  
 GCTGACGCTATGGAAAAAGTGGGTAAAGACGGCGTGATCACCGTTGAGGAAGCTAAGGGC  
 A D A M E K V G K D G V I T V E E A K G  
 610 630 650  
 ATTGAAGATGAATTGGATGTCGTAGAAGGCATGCAATTTGATAGAGGCTACCTCTCCCT  
 I E D E L D V V E G M Q F D R G Y L S P

FIG. 5A

ERSATZBLATT

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[illegible]

FIG. 5B

## ERSATZRI ATT

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1330 1350 1370  
GCTCAAAAAGTGCATTTGAATTTGCACGATGATGAAAAAGTGGGCTATGAAATCATCATG  
A Q K V H L N L H D D E K V G Y E I I M  
1390 1410 1430  
CGCGCCATTAAAGCCCCATTAGCTCAAATCGCTATCAACGCTGGTTATGATGGCGGTGTG  
R A I K A P L A Q I A I N A G Y D G G V  
1450 1470 1490  
GTCGTGAATGAAGTAGAAAAACACGAAGGGCATTTTGGTTTTAACGCTAGCAATGGCAAG  
V V N E V E K H E G H F G F N A S N G K  
1510 1530 1550  
TATGTGGATATGTTTAAAGAAGGCATTATTGACCCCTTAAAGTAGAAAGGATCGCTCTA  
Y V D M F K E G I I D P L K V E R I A L  
1570 1590 1610  
CAAAATGCGGTTTCGGTTTCAAGCCTGCTTTTAACACAGAAGCCACCGTGCATGAAATC  
Q N A V S V S S L L L T T E A T V H E I  
1630 1650 1670  
AAAGAAGAAAAAGCGACTCCGGCAATGCCTGATATGGGTGGCATGGGCGGTATGGGAGGC  
K E E K A T P A M P D M G G M G G M G G  
1690 1710 1730  
ATGGGCGGCATGATGTAAGCCCGCTTGCTTTTTAGTATAATCTGCTTTTAAATCCCTTC  
M G G M M \*  
1750 1770 1790  
TCTAAATCCCCCCTTTCTAAATCTCTTTTTGGGGGGGTGCTTTGATAAAACCGCTCG  
  
1810 1830  
CTTGTA AAAACATGCAACAAAAAATCTCTGTTAAGCTT

FIG. 5C